

## ABSTRACT

Affords efficiently and at low cost optical fibers capped at the end with a working, tiny optically diffractive film. An optical fiber (F) includes a diffractive film (DF) formed onto an endface thereof, or onto the endface of a collimator (C) joined to the endface of the fiber; the diffractive film includes a transparent DLC (diamond-like carbon) layer; and the DLC layer includes a modulated-refractive-index diffraction grating containing local regions of relatively high refractive index and local regions of relatively low refractive index.